Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

# ENVIRONMENTAL ASSESSMENT
**For Routine Actions with Limited Environmental Impact**

## Part I. Proposed Action Description

1. Applicant/Contact name and address: River Farm, LLC
   100 River Farm Trail
   Hamilton, MT 59840

2. Type of action: Application to Change a Water Right No. 76H-30062915

3. Water source name: Groundwater tributary to Canyon Creek and the Bitterroot River

4. Location affected by project: Section 24, T6N, R21W, Ravalli County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

   River Farm, LLC submitted an Application to Change a Water Right to DNRC requesting authorization to change the points of diversion and reduce the places of use for Statement of Claim Nos. 76H-114351-00, 76H-116589-00, 76H-116779-00, and 76H-116780-00. The new points of diversion will consist of two wells that are hydraulically connected to Canyon Creek. The wells are located on the Applicant's property and will have a maximum combined pumping rate of 592.5 GPM. This application also proposes to reduce the combined place of use from 65 to 46 acres to ensure historic consumptive use is not exceeded. The Department finds that irrigation is a beneficial use under §85.2.102(4)(a), MCA.

   The DNRC shall issue a change authorization if an Applicant proves the criteria in §85-2-402 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

| | |
|---|---|
| Montana Natural Heritage Program | Species of Concern |
| Montana Department of Fish, Wildlife and Parks | 2005 Montana dewatered streams |
| Montana Department of Environmental Quality | 303(d) list of impaired streams |
| Montana Department of Environmental Quality | 305(b) list of impaired streams |

## Part II. Environmental Review

### 1. Environmental Impact Checklist:

## PHYSICAL ENVIRONMENT

**WATER QUANTITY, QUALITY AND DISTRIBUTION**

***Water quantity*** *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

N/A – This application is for a groundwater appropriation

*Determination*: No significant impact

***Water quality*** *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

N/A – This application is for a groundwater appropriation

*Determination:* No significant impact

***Groundwater*** *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Pump tests and groundwater modeling conducted by the applicant are inadequate to assess the impacts of groundwater withdrawal on groundwater supply. The proposed use of groundwater for irrigation will not result in impacts to groundwater quality as no source of contaminates were identified. The proposed appropriation of groundwater will have an impact on the amount of surface water in the Bitterroot River. The annual effect to the Bitterroot River will be a net gain of approximately 2.31 AF of water, with gains to streamflows occurring during the months of April through July, offsetting depletions occurring during the months of August through March. Depletions to the Bitterroot River during August through March range from a low of 4.68 AF in March to highs of 21.85 AF in August and 26.04 AF in September. The average flow rates for depletions during August and September are 159 GPM and 196 GPM, respectively. Median of the mean monthly flows for the months when depletions are projected to occur range from a low of 710.9 cfs (319,052 GPM) to a high of 866.8 cfs (389,020 GPM). Depletions of 159 GPM to 196 GPM (0.05%) are immeasurable when compared to the amount of water flowing in the river and would not result in a significant impact to either fisheries or aquatic resources.

*Determination*: No significant impact

**DIVERSION WORKS** - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

The applicant has installed one well and has plans to install another. Both wells will have an 8-inch diameter casing and will be powered by a 7½ Horse Power submersible pump. Water will be delivered to the respective places of use through seven wheel lines, delivering a maximum flow rate of 592.5 GPM during a 10-day rotation schedule. The proposed project will not require construction activity to occur in riparian areas adjacent to the Bitterroot River. The proposed diversion location is on a bench above the river in a field that has been historically cultivated for hay production. The proposed groundwater appropriation will result in depletions to the Bitterroot River; however, the amount of depletion will not result in a flow modification significant enough to create a barrier to fish migration or affect the natural morphology of the Bitterroot River. The applicant has not adequately modeled impacts to groundwater supply to determine effects on future well construction.

*Determination*: No significant impact.

**UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES**

***Endangered and threatened species*** - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

The Montana Natural Heritage Program was contacted to determine if there are any threatened or endangered fish, wildlife, plants, or aquatic species or any "species of special concern" that could be impacted by the proposed project.

In the vicinity of Section 24, Township 6 North, Range 21 West, Ravalli County, the Montana Natural Heritage Program identified the following animal species of concern: Great Blue Heron, Bald Eagle, Lewis's Woodpecker, Pileated Woodpecker, Clark's Nutcracker, Westslope Cutthroat Trout, Bull Trout, Fringed Myotis, Townsend's Big-eared Bat, and Western Skink.

The proposed project will result in a reduction of irrigated acres, from 65 to 46, and the method of irrigation will change from flood irrigation from a surface water source to sprinkler irrigation from a groundwater source. The proposed changes will not impact the animal species of concern identified by the Montana Natural Heritage Program. The proposed irrigated acreage has been historically irrigated for over a century and will remain so if the authorization is granted. The proposed project will not result in any ground disturbance other than what is required to drill wells, and upon completion of construction the site will remain rural agricultural land. Depletions to surface water sources will not be significant enough to impact Bull Trout or Cutthroat Trout.

*Determination*: No significant impact

***Wetlands*** *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

The proposed project does not create or impact any wetlands.

*Determination*: No impact.

***Ponds*** *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

The proposed project does not create or impact any ponds.

*Determination*: No impact.

**GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE** - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

The proposed conversion from flood irrigation to sprinkler irrigation will not cause degradation of soil quality, alteration of soil stability, or moisture content. Construction associated with the proposed change consists of drilling two wells; however, no confining layers have been identified and water will still be used for the purpose of irrigation. Soils in the vicinity of the place of use are primarily composed of gravelly loam, gravelly sandy loam, very gravelly loamy course sand, and extremely gravelly coarse sand; none of these soil types are susceptible to saline seep.

*Determination*: No impact.

**VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS** - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

The proposed places of use are all within the historic places of use and the purpose of each right proposed for change will remain irrigation. The existing vegetative cover is alfalfa and pasture grass and will remain so if the authorization is granted. River Farm, LLC has the responsibility of controlling for weeds in the areas that will no longer be irrigated with these water rights.

*Determination*: No impact.

**AIR QUALITY** - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Deterioration of air quality and/or adverse effects on vegetation due to increased air pollutants is not expected. The water will be diverted using electric motors, therefore, there will be no emissions and/or increased noise levels associated with the proposed appropriation of groundwater.

*Determination*: No impact.

HISTORICAL AND ARCHEOLOGICAL SITES ***- Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.***

NA – project not located on State or Federal Lands.

*Determination*: No impact.

**DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY -** *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

The Department only needs to address Historical and Archeological sites in the EA if the project is located on State Trust Land or Federal land. This project is not located on state of federal land and thus, this section is not applicable.

*Determination*: No impact.

## HUMAN ENVIRONMENT

**LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS** - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

The project is located in an area with no locally adopted environmental plans.

*Determination*: No impact.

**ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES** - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

The proposed project will not inhibit, alter or impair access to present recreational opportunities in the area. The project is taking place on privately owned land that has been historically irrigated and is bordered by the Bitterroot River, private property or roads on all sides. The project is not expected to create any significant pollution or noise in the area that may alter the quality of recreational opportunities in the immediate vicinity.

*Determination*: No impact.

**HUMAN HEALTH** - *Assess whether the proposed project impacts on human health.*

The proposed project will not result in any impacts to human health.

*Determination*: No Impact.

**PRIVATE PROPERTY** - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No **X** If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

*Determination*: No impact.

**OTHER HUMAN ENVIRONMENTAL ISSUES** - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

*Impacts on:*

(a) *Cultural uniqueness and diversity?* None identified

(b) *Local and state tax base and tax revenues?* None identified

(c) *Existing land uses?* None identified

(d) *Quantity and distribution of employment?* None identified

(e) *Distribution and density of population and housing?* None identified

(f) *Demands for government services?* None identified

(g) *Industrial and commercial activity?* None identified

(h) *Utilities?* None identified

(i) *Transportation?* None identified

(j) *Safety?* None identified

(k) *Other appropriate social and economic circumstances?* None identified

**2.** ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: None identified

Cumulative Impacts: None identified

**3.** ***Describe any mitigation/stipulation measures:*** None identified

**4.** ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** No alternative identified.

*PART III. Conclusion*

***1. Preferred Alternative:*** N/A

***2 Comments and Responses:*** N/A

**3. *Finding:***
*Yes___ No* **X** *Based on the significance criteria evaluated in this EA, is an EIS required?*

*If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:*

An EA is the appropriate level of analysis for this proposed action because no significant impacts have been identified as a result of the proposed action.

*Name of person(s) responsible for preparation of EA:*

*Name:* Amy Groen
*Title:* Hydrologist/Specialist
*Date*: 05/02/2013